

REMARKS

The application has been carefully reviewed in light of the Office Action dated December 4, 2002. Claim 4 has been amended. Claims 8 and 9 are newly added. Claims 1-9 are now pending in this case.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned “**Version with markings to show changes made.**”

Claim 4 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 4 has been amended to address the rejection and is in compliance with § 112.

Claims 1 and 5 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Welker (U.S. Patent No. 6,076,139). Applicant respectfully traverses the rejections and requests reconsideration.

Claim 1 recites an arbitration method of a bus bridge, which interfaces, “a primary-side bus with a plurality of secondary buses.” Claim 1 also recites, “giving an access right equally to each of the secondary-side buses, when access demands to the primary-side bus are lodged from more than two of the secondary-side buses at the same time, by not giving a priority to any one of the secondary-side buses.” [Emphasis added].

Welker fails to disclose (or render obvious) all of the limitations of claim 1. For example, Welker does not disclose (or render obvious), giving an access right equally to each of a plurality of secondary-side buses when more than two of the secondary side buses demand access to the primary-side bus. x

Welker, to the contrary, merely discloses a Host Bus 104, a Firewire bus 108, a USB 110, and a PCI bus 124, competing to access a memory 132. That is, Welker does not disclose the Firewire, USB or PCI buses attempting to access the Host Bus 104 (or

vice versa), much less an arbitration method for managing such access. Therefore, the rejection of claim 1 under 35 U.S.C. § 102(e) should be withdrawn.

Claim 5 depends directly from claim 1 and is allowable over Welker at least for the reasons mentioned above in connection with claim 1, and also because Welker does not anticipate (or render obvious) the inventive combination defined by claim 5. Therefore, the rejection of claim 5 should be withdrawn.

Claims 2 and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Welker. Applicant respectfully traverses the rejections and requests reconsideration.

Claims 2 and 4 depend from claim 1 and are allowable at least for those reasons mentioned above in connection with claim 1, and because Welker does not teach, suggest, or otherwise motivate one skilled in the art to arrive at the respective inventive combinations defined by claims 2 and 4. Accordingly, the rejections of claim 2 and 4 over Welker should be withdrawn.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Welker in further view of Wei et al. (U.S. Patent No. 6,205,486). Applicant respectfully traverses the rejection and requests reconsideration.

Claim 3 depends from claim 1 and is allowable over Welker at least for those reasons mentioned above in connection with claim 1. In addition, Wei fails to even mention the IEEE 1394 standard, much less, "giving a priority right to the serial bus in accordance with IEEE 1394; and maintaining the access right . . . when an access demand is lodged from the secondary-side buses other than the serial bus," as defined by claim 3. Accordingly, even if Wei motivated one skilled in the art to combine its teachings with Welker, which it does not, the combination of Welker and Wei still does not teach or suggest all of the limitations of claim 3, and the rejection of claim 3 should be withdrawn. X

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Welker in further view of Quackenbush et al. (U.S. Patent No. 6,163,824). Applicant

respectfully traverses the rejection and requests reconsideration.

Claim 6 depends directly from claim 1 and further recites “giving a highest priority to the primary side bus when the primary-side bus lodges an access demand to the secondary-side buses irrespective of a condition of arbitration between the secondary-side buses.”

At least for the reasons mentioned above with respect to claim 1, claim 6 is allowable over Welker. In addition, Quackenbush merely discloses a single PCI local bus 22A coupled to a plurality of port controllers 26A-H and to a PCI bridge 38, and a round robin access scheme for accessing the single local PCI bus 22A when all of the port controllers 26A-H are the same type. Quackenbush at column 4, lines 47-50. Quackenbush fails to teach or suggest a “primary-side bus” and a “secondary-side bus” interfaced by a bus bridge in which the bus bridge gives a highest priority to the primary-side bus, “when the primary-side bus lodges an access demand to the secondary-side buses irrespective of a condition of arbitration between the secondary-side buses.”

Thus, even if one accepts *arguendo* that Welker may rightly be combined with Quackenbush, the proposed combination still does not teach or suggest the invention as claimed. Accordingly, the combination of Welker and Quackenbush does not teach or suggest all of the limitations of claim 6, and the rejection of claim 6 should be withdrawn.

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Welker in further view of Quackenbush. Applicant respectfully traverses the rejection and requests reconsideration.

Claim 7 recites an arbitration method of a bus bridge, which interfaces “a primary-side bus with a plurality of secondary-side buses.” Claim 7 also recites “giving a highest priority to the primary-side bus when the primary-side bus lodges an access demand to the secondary-side buses irrespective of a condition of an arbitration between the secondary-side buses.” At least for the reasons mentioned above in connection with claim

6, claim 7 is allowable over Welker and Quackenbush. Accordingly, the combination of Welker and Quackenbush does not teach or suggest all of the limitations of claim 7, and the rejection of claim 7 should be withdrawn.

Newly added claim 8 recites an arbitration system comprising “a bus bridge; a primary side bus; and a plurality of secondary side buses coupled to the primary side bus via said bus bridge.” Claim 8 also recites that the bus bridge is “configured to give access rights equally to each of the secondary side buses, when access demands to the primary side bus are lodged from more than two of the secondary side buses at the same time, by not giving a priority to any one of the secondary side buses.”

Claim 9 depends from claim 8 and further recites that “one of the secondary side buses is a serial bus in accordance with IEEE 1394, and the remaining secondary side buses are card buses.”

At least for those reasons mentioned above in connection with claim 1, the cited references fail to teach or suggest the respective inventive combinations defined by newly added claims 8 and 9.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application (with claims 1-9) to issue.

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Respectfully submitted,

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4. (Amended) The arbitration method as claimed in claim 2, wherein the secondary-side buses include a plurality of card buses, [and] the [arbitration] method comprising [the steps of]:

performing [an] a first arbitration operation between the serial bus [in accordance with IEEE 1394] and at least two of the card buses when access demands are lodged from the serial bus [in accordance with IEEE 1394] and also from the at least two of the card buses; and

performing [an] a second arbitration operation between the at least two of the card buses when an access right is to be given to only one of the at least two of the card buses.